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N. E. FARMER.

From Harris's Report on the Insects of Massachusetts.

PLANT LICE.

Aphides, or plant-lice, as they are usually called, are among the most extraordinary of insects. They are found upon almost all parts of plants, the roots, stems, young shoots, buds, and leaves, and there is scarcely a plant which does not harbor one or two kinds peculiar to itself. They are, moreover, exceedingly prolific, for Reamur has proved that one individual, in five generations, may become the progenitor of nearly six thousand millions of descendants. It often happens that the succulent extremities and stems of plants will, in an incredibly short space of time, become completely coated with a living mass of these little lice. These are usually wingless, consisting of the young and of the females only; for winged individuals appear only at particular seasons, usually in the autumn, but sometimes in the spring, and these are small males and larger females. After pairing, the latter lay their eggs upon or near the leaf-buds of the plant upon which they live, and, together with the males, soon afterwards perish.

The genus to which plant-lice belong is called *Aphis*, from a Greek word which signifies to exhaust. The following are the principal characters by which they may be distinguished from other insects. Their bodies are short, oval, and soft, and are furnished at the hinder extremity with two little tubes, knobs, or pores, from which exude almost constantly minute drops of a fluid as sweet as honey; their heads are small, their beaks are very long and tubular, their eyes are globular, but they have not eyelets, their antennæ are long, and usually taper towards the extremity, and their legs are also long and very slender, and there are only two joints to their feet. Their upper are nearly twice as large as the lower wings, are much longer than the body, are gradually widened towards the extremity, and nearly triangular; they are almost vertical when at rest, and cover the body above like a very sharp-ridged roof.

The winged plant-lice provide for a succession of their race by stocking the plants with eggs in the autumn, as before stated. These are hatched in due time in the spring, and the young lice immediately begin to pump up sap from the tender leaves and shoots, increase rapidly in size, and in a short time come to maturity. In this state, it is found that the brood, without a single exception, consists wholly of females, which are wingless, but are in a condition immediately to continue their kind. Their young, however, are not hatched from eggs, but are produced alive, and each female may be the mother of fifteen or twenty young lice in the course of a single day. The plant-lice of this second generation are also wingless females, which grow up and have their young in due time; and thus brood after brood is produced, even to the seventh generation or more, without the appearance or intervention, throughout the whole season, of a single male. This extraordinary kind of propagation ends in the autumn with the birth of a brood of males and females, which in due time acquire wings and pair; eggs are then laid by these females, and with the death of these winged individuals, which soon follows, the race becomes extinct for the season.

Plant-lice seem to love society, and often herd together in dense masses, each one remaining fixed to the plant by means of its long tubular beak; and they rarely change their places till they have exhausted the part first attacked. The attitudes and manners of these little creatures are exceedingly amusing. When disturbed, like restive horses, they begin to kick and sprawl in the most ludicrous manner. They may be seen at times suspended by their beaks alone, and throwing up their legs as if in a high frolic, but too much engaged in sucking to withdraw their beaks. As they take in great quantities of sap, they would soon become gorged if they did not get rid of the superabundant fluid through the two little tubes or pores at the extremity of their bodies. When one of them gets running-over full, it seems to communicate its uneasy sensations, by a kind of animal magnetism, to the whole flock, upon which they all, with one accord, jerk upwards their bodies, and eject a shower of the honeyed fluid.

The leaves and bark of plants much infested by these insects are often completely sprinkled over with drops of this sticky fluid, which, on drying, become dark-colored, and greatly disfigure the foliage. This appearance has been denominated honey-dew; but there is another somewhat similar production observable on plants, after very dry weather, which has received the same name, and consists of an extravasation or oozing of the sap from the leaves. We are often apprized of the presence of plant-lice on plants growing in the open air, by the ants ascending and descending the stems. By observing the motions of the latter, we soon ascertain that the sweet fluid discharged by the lice is the occasion of these visits. The stems swarm with slim and hungry ants, running upwards, and others lazily descending, with their bellies swelled almost to bursting. When arrived in the immediate vicinity of the plant-lice, they greedily wipe up the sweet fluid which has distilled from them, and, when this fails, they station themselves among the lice, and catch the drops as they fall. The lice do not seem in the least annoyed by the ants, but live on the best possible terms with them; and, on the other hand, the ants, though unsparing of other insects weaker than themselves, upon which they frequently prey, treat the plant-lice with the utmost gentleness, caressing them with their antennæ, and apparently inviting them to give out the fluid by patting their sides. Nor are the lice inattentive to these solicitations, when in a state to gratify the ants, for whose sake they not only seem to shorten the periods of the discharge, but actually yield the fluid when thus pressed. A single louse has been known to give it drop by drop successively to a number of ants, that were waiting anxiously to receive it. When the plant-lice cast their skins, the ants instantly remove the latter, nor will they allow any dirt or rubbish to remain upon or about them. They even protect them from their enemies, and run about them in the hot sunshine to drive away the little ichneumon flies that are forever hovering near to deposit their eggs in the bodies of the lice.

Plant-lice differ very much in form, color, clothing, and in the length of the honey-tubes. Some have these tubes quite long, as the rose-louse, *Aphis rosæ*, which is green, and has a little conical projection or stylet, as it is called, at the extremity of the body, between the two honey-tubes. The cabbage-louse, *Aphis brassicæ*, has also long honey-tubes, but its body is covered with a whitish mealy substance. This species is very abundant on the under side of cabbage leaves in the month of August. The largest species known to me is found in clusters beneath the limbs of the pig-nut hickory *(Carya porcina,)* in all stages of growth, from the 1st to the middle of July. It is the *Aphis caryæ* of my Catalogue. Its body, in the winged state, measures one quarter of an inch to the end of the abdomen, and above four-tenths of an inch to the tips of the upper wings, which expand rather more than seven-tenths of an inch. It has no terminal stylet, and the honey-tubes are very short. Its body is covered with a bluish white substance like the bloom of a plum, with four rows of little transverse black spots on the back; the top of the thorax, and the veins of the wings are black, as are also the shanks, the feet, and the antennæ, which are clothed with black hairs; the thighs are reddish brown. This species sucks the sap from the limbs and not from the leaves of the hickory. There is another large species, living in the same way on the under side of the branches of various kinds of willows, and clustered together in great numbers. About the first of October they are found in the winged state. The body is one-tenth of an inch in length, and the wings expand about four-tenths. The stylet is wanting; the body is black and without spots; the wings are transparent, but their veins, the short honey tubercles, the third joint of the antennæ, and the legs, are tawny yellow. This species cannot be identical with the willow-louse, *Aphis salicis* of Linnæus, which has a spotted body; and therefore I propose to call it *Aphis salicti*, the plant-louse of willow groves. When crushed, it communicates a stain of a reddish or deep orange color.

Some plant-lice live in the ground and derive their nourishment from the roots of plants. We annually lose many of our herbaceous plants, if cultivated in a light soil, from the exhausting attacks of these subterranean lice. Upon pulling up China Asters, which seemed to be perishing from no visible cause, I have found hundreds of little lice, of a white color, closely clustered together on the roots. I could never discover any of them that were winged, and therefore conclude from this circumstance as well as from their peculiar situation, that they never acquire wings. Whether these are of the same species as the *Aphis radicum* of Europe, I cannot ascertain, as no suffi-

cient description of the latter has ever come to my notice. These little lice are attended by ants, which generally make their nests near the roots of the plants, so as to have their milch kine, as the plant-lice have been called, within their own habitations; and in consequence of the combined operations of the lice and the ants, the plants wither and prematurely perish. When these subterranean lice are disturbed, the attendant ants are thrown into the greatest confusion and alarm; they carefully take up the lice which have fallen from the roots, and convey them in their jaws into the deep recesses of their nests; and here the lice still contrive to live upon the fragments of the roots left in the soil. It is stated in Kirby and Spence's Introduction to Entomology, that the ants bestow the same care and attention upon the root-lice as upon their own offspring—that they defend them from the attacks of other insects, and carry them about in their mouths to change their pasture; and that they pay particular attention to the eggs of the lice, frequently moistening them with their tongues, and in fine weather bringing them to the surface of the nest, to give them the advantage of the sun. On the other hand, the sweet fluid supplied in abundance by these lice forms the chief nutriment both of the ants and their young, which is sufficient to account for their solicitude and care for their valuable herds.

The peach tree suffers very much from the attacks of plant-lice, which live under the leaves, causing them by their punctures to become thickened, to curl or form hollows beneath, and corresponding crispy and reddish swellings above, and finally to perish and drop off prematurely. Whether our insect is the same as the European Aphis of the peach tree (*Aphis Persicæ* of Sulzer,) I cannot determine, for the want of a proper description of the latter. The depredations of these lice is one of the causes, if not the only cause, of the peculiar malady affecting the peach tree in the early part of summer, and called the blight.

The injuries occasioned by plant-lice are much greater than would at first be expected from the small size and extreme weakness of the insects; but these make up by their numbers what they want in strength individually, and thus become formidable enemies to vegetation. By their punctures, and the quantity of sap which they draw from the leaves, the functions of these important organs are deranged or interrupted, the food of the plant, which is there elaborated to nourish the stem and mature the fruit, is withdrawn, before it can reach its proper destination, or is contaminated and left in a state unfitted to supply the wants of vegetation.

Plants are differently affected by these insects. Some wither and cease to grow, their leaves and stems put on a sickly appearance, and soon die from exhaustion. Others, though not killed, are greatly impeded in their growth, and their tender parts, which are attacked, become stunted, curled, or warped.

The punctures of these lice seem to poison some plants, and affect others in a most singular manner, producing warts or swellings, which are sometimes solid and sometimes hollow, and contain in their interior a swarm of lice, the descendants of a single individual, whose punctures were the original cause of the tumor. I have seen reddish tumors of this kind, as big as a pigeon's egg, growing upon leaves, to which they were attached by a slender neck, and containing thousands of small lice in their interior. Naturalists call these tumors galls, because they seem to be formed in the same way as the oak galls which are used in the making of ink. The lice which inhabit or produce them, generally differ from the others, in having shorter antennæ, being without honey-tubes, and in frequently being clothed with a kind of white down, which, however, disappears when the insects become winged.

These downy plant-lice are now placed in the genus *Eriosoma*, which means woolly body, and the most destructive species belonging to it was first described under the name of *Aphis lanigera*, by Mr Hausmann, in the year 1801, as infesting the apple trees in Germany. It seems that it had been noticed in England as early as the year 1787, and has since acquired there the name of American blight, from the erroneous supposition that it had been imported from this country. It was known, however, to the French gardeners for a long time previous to both of the above dates, and, according to Mr Rennie, is found in the orchards about Harfleur, in Normandy, and is very destructive to the apple trees in the department of Calvados. There is now good reason to believe that the miscalled American blight is not indigenous to this country, and that it has been introduced here with fruit trees from Europe. Some persons, indeed, have supposed that it was not to be found in this country, at all, but the late Mr Buel has stated that it existed on his apple trees, and I have once or twice seen it on apple trees in Massachusetts, where, however, it stills appears to be rare, and consequently I have not been able to examine the insects sufficiently myself. The best account that I have seen of them is contained in Knapp's "Journal of a Naturalist," from which, and from Hausmann's description, the following observations are chiefly extracted.

The eggs of the woolly apple tree louse are so small as not to be distinguished without a microscope, and are enveloped in a cotton-like substance furnished by the body of the insect. They are deposited in the crotches of the branches and in the chinks of the bark at or near the surface of the ground, especially if there are suckers springing from the same place. The young, when first hatched, are covered with a very short and fine down, and appear in the spring of the year like little specks of mould on the trees. As the season advances, and the insect increases in size, its downy coat becomes more distinct, and grows in length daily. This down is very easily removed, adheres to the fingers when it is touched, and seems to issue from all the pores of the skin of the abdomen. When fully grown, the insects of the first brood are one tenth of an inch in length, and when the down is rubbed off, the head, antennæ, sucker, and shins are found to be of a blackish color, and the abdomen honey-yellow. The young are produced alive during the summer, are buried in masses of the down, and derive their nourishment from the sap of the bark and of the alburnum or young wood immediately under the bark. The adult insects never acquire wings, at least such is the testimony both of Hausmann and Knapp, and are destitute of honey-tubes, but from time to time emit drops of a sticky fluid from the extremity of the body. These insects, though destitute of wings, are conveyed from tree to tree by means of their long down, which is so plentiful and so light, as easily to be wafted by the winds of autumn, and thus the evil will gradually spread throughout an extensive orchard. The numerous punctures of these lice produce on the tender shoots a cellular appearance, and wherever a colony of them is established, warts or excrescences arise on the bark; the limbs thus attacked become sickly, the leaves turn yellow and drop off; and, as the infection spreads from limb to limb, the whole tree becomes diseased, and eventually perishes. In Gloucestershire, England, so many apple trees were destroyed by these lice in the year 1810, that it was feared the making of cider must be abandoned. In the north of England, the apple trees are greatly injured, and some annually destroyed by them, and in the year 1826, they abounded there in such incredible luxuriance, that many trees seemed, at a short distance, as if they had been whitewashed.

Mr Knapp thinks that remedies can prove efficacious in removing this evil only upon a small scale, and that when the injury has existed for some time, and extended its influence over the parts of a large tree, it will take its course, and the tree will die. He says that he has removed this blight from young trees, and from recently attacked places in those more advanced, by painting over every node or infected part of the tree with a composition consisting of three ounces of melted resin mixed with the same quantity of fish oil, which is to be put on while warm, with a painter's brush.

Sir Joseph Banks, succeeded in extirpating the insects from his own trees by removing all the old and rugged bark, and scrubbing the trunk and branches with a hard brush. The application of the spirits of tar, of spirits of turpentine, of oil, urine, and of soft soap, has been recommended. Mr Buel found that oil sufficed to drive the insects from the trunks and branches, but that it could not be applied to the roots, where he stated numbers of the insects harbored.

The following treatment I am inclined to think will prove as successful as any which has heretofore been recommended. Scrape off all the rough bark of the infected trees, and make them perfectly clean and smooth early in the spring; then rub the trunk and limbs with a stiff brush wet with a solution of potash, as hereafter recommended for the destruction of bark lice; after which remove the sods and earth around the bottom of the trunk, and with the scraper, brush, and alkaline liquor, cleanse that part as far as the roots can conveniently be uncovered. The earth and sods should immediately be carried away, fresh loam should be placed around the roots, and all cracks and wounds should be filled with grafting cement or clay mortar. Small limbs and extremities of branches, if infected, and beyond reach of the applications, should be cut off and burned.

There are several other species of *Eriosoma* or downy lice in this State, inhabiting various forest and ornamental trees, some of which may also have been introduced from abroad. The descriptions of foreign plant-lice are mostly so brief and imperfect that it is impossible to ascertain from them which of our species are identical with those of Europe; I shall therefore omit any further account of these insects, and close this part of the subject with a few remarks on the remedies to be employed for their destruction generally, and some notice of the natural enemies of plant-lice.

Solutions of soap, or a mixture of soap-suds and tobacco-water, used warm, and applied with a watering pot or with a garden engine, may be employed for the destruction of these insects. It is said that hot water may also be employed for the

same purpose with safety and success. The water, tobacco-tea, or suds should be thrown upon the plants with considerable force, and if they are of the cabbage or lettuce kind, or other plants whose leaves are to be used as food, they should subsequently be drenched thoroughly with pure water. Lice on the extremities of branches may be killed by bending over the branches and holding them for several minutes in warm and strong soap-suds. Lice multiply much faster, and are more injurious to plants, in a dry than in a wet atmosphere; hence in green houses, attention should be paid to keep the air sufficiently moist, and the lice are readily killed by fumigations with tobacco or with sulphur. To destroy subterranean lice on the roots of plants I have found that watering with salt water was useful, if the plants were hardy; but tender, herbaceous plants cannot be treated in this way, but may sometimes be revived, when suffering from these hidden foes, by free and frequent watering with soap-suds.—*Harris's Report on the Insects of Massachusetts.*

TURNIPS.

The introduction of the turnip among the cultivated crops, constitutes an era in the art of husbandry. Of the several varieties which are cultivated, we may select three, as most worthy of attention—the yellow, white, and Swedish or ruta baga turnips.

1. *Ruta Baga*, or Swedish turnip, is the most important of these varieties, and yields the largest quantity of vegetable matter for the use of farm stock. It should be remarked, also, that there are varieties in this root. The best have a yellowish look, globular form, and have no neck or stem. The green and yellow kinds often prove abortive. The seed should be black and full. One pound will suffice for an acre of land. One half a pound will produce plants enough for an acre; but as the seed is liable to fail, a pound is not too much to ensure a crop.

The time for sowing is from the 20th of June to the 5th of July.

The soil best adapted to turnips, is a light, dry and friable loam; or almost any dry soil, with the exception of heavy clays.

The soil is best prepared by throwing it into drills 8 (?) feet [3 feet—Ed.] apart, filling the drills with short manure or compost, and after covering it with a plow, two furrows on each side, sow with a drill barrow. The ruta baga flourishes best on a clover ley, and may be sowed after the first crop of clover is taken. If long manure is applied, it should be covered with a plow. If rotted, it should be placed under the seed, so that the roots will penetrate it. The plants generally make their appearance in 8 or 10 days after sowing; they should then be horse-hoed with the cultivator, and the soil should be removed as near to the plants as possible, in order to destroy the weeds. The hoe should then be employed, and the plants thinned to a distance of 8 or 10 inches.

The quality of this crop depends upon the size; and what is rather remarkable, the larger they are the more nutriment they possess in proportion to their weight.

The value of this crop is variously estimated by different farmers. The products are, upon an average, 600 bushels per acre. Some estimate the net profit at 80 dollars per acre; but their value will vary in different places and seasons. There is no doubt but that it is one of the most valuable crops raised by the farmer, although they are much less esteemed than they formerly were.

This root is excellent for all kinds of farm stock. They are said to be useful for fattening hogs, cattle and sheep. They may be fed raw, sliced, and a small quantity of salt sprinkled over them.

2. The *White* turnip requires a similar soil and treatment; but may be sowed as late as the 25th of July. They are not so productive as the preceding, but are excellent for a second crop, or for feeding cattle in the fall; by which course light soils may be improved.

3. The *Yellow* varieties may be sown about the 15th of July, and are richer than the white. Sinclair estimates the amount of nourishment in 64 drachms as follows:

White tankard,	76 *grs.*
Common white loaf,	80 "
Norfolk white,	73 "
Store or garden,	85 "
Ruta baga,	110 "

The following table gives the nutritive properties of several varieties—the green-top yellows being taken as a standard:—

Species and varieties.	*Should weigh by size and standard.*	*Actual weight.*
	lbs. oz.	lbs. oz.
Green-top yellow,	16.00	15.00
Swedish or ruta baga,	11.2	13.12
Red-top yellow,	12.00	12.10
Dalis hybrid,	13.12	12.00
White globe,	20.8	15.8
Red-top white,	16 8	13.00
Green-top white,	8.7	8.8
White tankard,	16.	14.
Purple do.	12.10	11.8

This table shows the superiority of the ruta baga over all the other varieties. It yields about 6 or 7 per cent. of its whole weight of nutritive matter, while the white varieties afford 4 per cent., and in the largest roots only 3 1-2 per cent., of their whole weight; hence, one acre of the Swedish variety is equal to one and a half acres of the white. "No person," says Lord Kaimes, "ever deserved better of his country, than he who first cultivated turnips in a field. No plant contributes more to fertility."

It appears from the investigations thus far made, that roots are by far the most profitable crops cultivated by the farmer t and that their more general introduction would both increase the value of the soil, and the quantity of productions from the farm, from the dairy and from farm stock.—*Gray's Scientific and Practical Agriculture.*

NATIONAL AGRICULTURAL SOCIETY.

A press of matter the present month, will prevent our giving as full an account of our "impressions" during our recent visit to Washington, and of the proceedings of the National Agricultural Society, the meeting of which we had the pleasure of attending, as we had contemplated. Railroad travelling, our readers are aware, is not the kind of travelling where a country is to be surveyed or the condition of its agriculture noted; but the glimpses caught, were sufficient to show that the prospects for the farmer were flattering; and that many fine farms and beautiful examples of improved husbandry were passed, which would doubtless have well repaid delay (could it have been permitted,) for their examination.

The meeting of the Society was opened on Wednesday, the 4th ult., at the Patent Office. Committees were appointed to report on various subjects—to nominate officers—and to report on the propriety of establishing an agricultural journal at Washington; and then the meeting adjourned until the next day at 10 o'clock. On Thursday, at the hour named, the Society again convened. There were present eight delegates from the New York State Ag. Society; two from the American Institute of New York city; two from New Haven, Ct.; one from New Jersey; one from Maryland; two from Virginia, including the President of the Society; and quite a number of gentlemen of Washington, among whom were the Hon. Mr Woodbury, Amos Kendall, J. S. Skinner, Hon. H. L. Ellsworth, O. B. Brown, Elisha Whittlesey, &c.

Mr Garnet, who was re-elected President, delivered an able and interesting address.

The proceedings of the Society were conducted very harmoniously; but to us, the enthusiasm, the *esprit du corps*, which seems so necessary to the accomplishment of all great undertakings dependant on voluntary action, seemed to be wanting. It must be remarked, however, that this is but the beginning; and that the interest which the success of the Society should certainly create, will be more deep, in proportion as its existence and acts are more extensively known.—*Albany Cultivator.*

RUTA BAGA FOR COWS.

One of the most serious objections to the culture of the turnip, especially in dairy districts, is the unpleasant flavor which this root communicates to milk and butter; and various means have been proposed to prevent these disagreeable results. One of the most successful that we have tried, has been feeding the roots immediately after milking, so as to have as long a time as possible intervene between the feeding and the milking. In a late number of the Cabinet, we find a letter from Samuel West, of Chester, Penn., describing his mode of feeding, which, while it is somewhat similar to ours, is said to totally obviate all taste of the turnip. He states also that the same method is applicable to garlic, so common and disagreeable in some parts of the United States:

"After a sufficiency of first rate upland hay, I allow to each cow about half a bushel of ruta baga turnips finely cut up—always remembering to strip the cows clear of milk *before feeding with the turnips*, and *in the morning*, feeding with a different kind of food, viz: cut hay, with a little Indian meal, or other mill feed. By this process there will be no taste of the turnip, either in the milk or butter, so objectionable to many; and by it you will have a full flow of milk from your cows, and butter of a fine, rich, spring-like quality, seldom obtained in the winter season."—*Ibid.*

To Wash Woollen Goods.—The art of washing woollen goods so as to prevent them from shrinking, is one of the desiderata in domestic economy worthy of being recorded, and it is therefore with a satisfaction we explain this simple process to our readers. All descriptions of woollen goods should be washed in very hot water with soap, and as soon as the article is cleansed, immerse it in cold water: let it then be wrung and hung up to dry.—*Southern Planter.*

The GOOD alone are GREAT.

MANURE—PLASTER.

From a heap of fermenting manure, a vapor continually rises, very different from the exhalation of a pond, as our noses might testify. Perhaps some may think that such thin diet as that would be of no consequence to a plant; but I can assure them it is the best part of the manure. Humphrey Davy filled a three pint vessel with a bent neck, from a fermenting heap of stable manure, while it was hot, and turned the beak among the roots of some grass. Nothing but vapor left the vessel; yet in less than a week the grass grew with much more luxuriance than the grass in any other part of the garden.

The value of this vapor is therefore evident; but how shall we save it? In the first place, the fermentation should be very gradual. Make the heap in the shade, or on the north side of a building, and manage it just as you would manage a coal-kiln. The more the air is excluded, the slower and better will be the process. Now covering it with earth will have this effect; but vapor will rise even when it ferments slowly, and therefore marl may be freely scattered through the heap as it is made; but no quick lime. Lime indeed, should form an outside covering for the whole pile (when marl is not at hand;) but it should be carefully prevented from coming in contact with stable manure, or any animal matter. It must not touch them. It spoils them. A layer of earth should be interposed; and then the lime would be highly useful in catching and retaining the fertilizing vapor as it rises.

I believe there is no difference of opinion on this subject among chemists. Humphrey Davy speaks in the plainest language against mixing quick lime with common dung as injurious; and other eminent men fully accord with the doctrine. On the outside of the heap, however, quick lime in a few weeks would be carbonated; and after undergoing this change, it might be safely mixed with the compost. A fresh coat may then be applied.

But some farmers may not wish to apply their barn yard manure in the spring, or make it into compost—they may prefer using it after harvest, and yet not have it wasting in the mean time. In that case, I would advise that it be thrown inward where it lies thin, just so far that this work conjointly with the work of covering it, shall amount to the least labor. Then cover the whole with straw or earth to protect it from the sun; and cause it to be trodden down by the cattle as firmly as possible, to exclude the air, and prevent fermentation. Some of you may recollect when forking up such matters after harvest, that the straw in spots was bright and unchanged. That was where it was well trodden. All change is attended with loss; but as some change may be expected, strew lime or marl and plaster plentifully over it, to absorb, or arrest the fertilizing vapor.

The effect of plaster (composed of lime and sulphuric acid) has long been a source of wonder; for it was a wonder how one bushel could add more than 20 times its own weight to a crop of clover. Inquiring minds of course have been busy in trying to explain the mystery; but I doubt if all the properties of manure are understood even at this day. Humphrey Davy was inclined to think that plaster was a necessary part of the woody fibre of some plants, analogous to the bony matter in animal structures. The plant could not do without it, though it wanted but little; and hence so small a quantity had such a powerful effect. "Plants which seem most benefited by its application," says that eminent chemist, "always afford it on analysis."

When this theory was announced some thirty years ago, it was rejected in this country, where the effects of plaster were much better known than in England, but if he could have shown that it enters into such plants in any definite proportion, some of the arguments against him might have been refuted. It appears, however, that he never pursued the inquiry with much interest.

Judge Peters, of Pennsylvania, had done more than any other person to extend the knowledge of this manure, and to favor its introduction. He had been very diligent and minute in his inquiries; and though not a professed chemist, became satisfied that sulphuric acid was the active ingredient in plaster. He showed from the observations of Berard, that lands near Catanea, in Sicily, abounding in volcanic matter, including sulphur,* were very fertile; and from an experiment by the same person, that brimstone, pounded, sifted, and mixed with ashes, had a surprising effect on lucerne and clover. Sulphuric acid greatly diluted with water, had a similar effect.

As a further confirmation of the effects of sulphur or sulphuric acid, when Chancellor Livingston was travelling in Flanders, he saw the farmers preparing pyrites for manure. This mineral is a combination of sulphur and iron, and when partially burnt, is employed in the same manner, and for the same purpose as we use plaster. Dr. Chapman, of Pennsylvania, found a similar result from sulphuret of barytes.

Last summer, a new work called *Organic Chemistry*, by Professor Liebig, of Germany, was first published in this country; and it has been considered by those best qualified to judge, as constituting a new era in agriculture. It is not my intention, however, to detain you with any of its details, except his explanation of the effects of plaster on growing plants.

Ammonia is an essential part of the food of plants. It affords all vegetables, without exception, with the nitrogen that enters into their composition. It is very volatile; but sulphuric acid (furnished by the plaster,) can prevent its flight, and fix it in the soil. This can only be done, however, when the plaster is dissolved. The sulphuric acid then unites with the ammonia, and the carbonic acid of the ammonia unites with the lime.

Such is the purport of Professor Liebig's explanation of this great mystery. If he is correct in ascribing *all*† the effect of plaster to this new combination, its importance in the economy of our farms, must be evident. All our fields, pastures, and meadows ought to be strewed with it; and in accordance with his suggestion, it ought to be scattered in all our stables and over all our barnyards. The quantity required is not great; and many experiments may be instituted at a trifling expense.

I ought to say, however, that this theory appears insufficient for explaining all the phenomena, in connexion with the use of plaster. Why is its effect on clover so extraordinary, and on wheat so insignificant? Judge Peters, after using it forty years, said he never found it beneficial on winter grain; and others, after long trials, thought it did little for the natural grasses. All these, however, are powerfully affected by stable manure—by the very ammonia‡ which that manure yields. And what do we observe? Clover of luxuriant growth, and close along side of it, wheat without any indication of benefit received, though both have been plastered alike.

Again—Professor Liebig informs us that every shower of rain, or fall of snow, brings down ammonia to the ground, where the plaster ought to arrest it, and the plants that feed on it ought to be more thrifty; but we have much testimony to show that on many fields no trace of such improvement could be discovered. These facts may not be inexplicable; but they appear to me at present, quite sufficient to hang a doubt on.

I am aware that we have statements in regard to the use of plaster, of the most conflicting kinds, so that with some few exceptions, what one denies, another affirms; but would this be so if it acts *solely* in the manner described by Professor Liebig? A simple cause might be expected to produce a uniform effect. For instance: Poudrette is a simple cause; and as far as I have understood, it operates with uniform effect, whether on clover, wheat or cabbages.

On some soils indeed, plaster is uniformly inefficient—not the trace of any effect is perceptible. This inertness has been more frequently observed in the *tertiary formation* near the sea coast; and therefore it was ascribed to the salt vapors. Plaster, however, succeeds well in many places on the coast, and fails in others far beyond the sea breeze, so that the cause seems to reside in the soil, and not in the air.

There are several substances that decompose plaster, besides the carbonate of ammonia. Carbonates of potash and soda have the same power. In the hands of the chemist, plaster and common salt readily change into sulphate of soda and chloride of lime; and Judge Peters said, "I ruined a bushel of plaster by a handful of salt—it was unfit for either cement or manure." Some of the oxalates also effect its decomposition.

When this happens, the plaster no longer exists; and most of these results are not known to be of much value as manures. Such failures, however, rarely occur on calcareous soils, or on such as contain a due proportion of lime. There plaster generally proves beneficial; and even in England it has succeeded on such lands. Many years ago, in the south-eastern part of Pennsylvania, some farmers thought it would supersede the use of lime; but it gradually lost its effect; regaining it, however, when the land was limed. Wherever plaster proves of no use, therefore, try *liming*. On a small scale, it may be done at a trifling expense; and may lead to the most beneficial results.

And remember that plaster must be dissolved before it can do any good. Sometimes there is not rain enough for this purpose in summer, and therefore there is always a risk to sow it late in the spring. Let it be done early.

I have now arrived at my last paragraph. From

*A late travellar writing from Italy, says of the peasants residing in the neighborhood of Vesuvius—"If their houses are buried, they return, when the lava cools, to build new ones, and cultivate a soil inexhaustibly fertile."

†"The evident influence of gypsum upon the growth of grasses, depends only upon its fixing in the soil the ammonia of the atmosphere."—*Liebig*, *p.* 142.

‡"Animal manure acts only by the formation of ammonia."—*Liebig*, *p.* 136.

bogs or deep swamps, manure may be manufactured to a great extent. Three parts of peat and one of stable dung are mixed together and fermented through the summer. It was used in England many years ago; and has been found in New England equal to the same bulk of stable manure, and more permanent in its effects.—*David Thomas's Address before the Cayuga Co. Agricul. Soc.*

SHEEP.

Washing.—The time for clipping varies much, being earlier in seasons which have been preceded by favorable weather and an unstinted allowance of food, than in such as have followed a rigorous winter, disease, or any other cause calculated to arrest the growth of wool. The season may be said to be limited by the middle of May and the middle of July; but this should not be taken as a rule of conduct, the best guide being the state of of the new coat, which ought always to be well above the skin before shearing is attempted. The wool, unless among some mountain flocks, is always, in this country, washed prior to its removal from the sheep's back; but in Spain that operation is always deferred till the fleeces have been collected, when they are subjected to a thorough scouring, in public buildings appropriated to the purpose, and termed *lavatories*. This is a plan in many respects superior to ours. Its adoption by our farmers has been recommended by Dr. Parry. There cannot be a doubt of its being the preferable mode as regards the saving it would effect in the lives of sheep; but as it is well known that shearing is much facilitated by washing, and that on the neatness with which the clipping is accomplished, the quality of the succeeding crop in a great measure depends, some little time will be necessary to determine the comparative value of either mode. In New South Wales, it is customary to make the sheep swim across a stream for two or three mornings before being washed, by which means the yolk is softened, and the removal of grease and dirt much promoted; but this, though a good plan in that mild and even climate, could not be looked upon as safe in a temperature so variable as that of Britain. In cases, however, where great nicety is required, the plan in vogue in the former country, that of dipping each sheep, before washing, into a cauldron of warm water, might be beneficially adopted.

Mountain sheep are cleaned by being forced to swim across a pool, but the finer or lowland breeds, are washed entirely by the hand. The latter method alone demands a short explanation. Dry, and if possible, sunny weather, is selected for the operation, on the morning of which the lambs are separated from the flock, and the latter is conveyed to the margin of some pebbly-bottomed pool. Here they are penned or otherwise kept together, while they are seized, one by one, by a man standing mid-thigh deep near the water edge, and turned back downwards, the head alone being above the surface. It is then turned from side to side, and moved backwards and forwards, so as to make the wool catch upon the stream and wave about. When the first washer has held it for a few minutes, and partially cleansed the fleece, he passes it up the river to the next, who goes through the same routine, and on being convinced that the skin is free from filth, compels the sheep to land by swimming in an oblique direction up the water. Three and even four men are sometimes employed in washing sheep but two, as here described, will, under ordinary circumstances, be found sufficient. The bank on which the dripping sheep are collected, should have a clean and firm turf, and the flock should, till fairly dry and fit for shearing, be kept on heavy grass land, or, what is better, in straw-bedded folds.

Shearing.—After allowing eight days, off or on, to elapse from the time of washing, so as to permit the wool to gain a fresh supply of yolk, and along with it lustre and elasticity, the sheep may be stripped of its fleece. As there is no saving in employing an unskillful clipper, every encouragement should be given to induce servants to cut close, smoothly, and evenly, and to avoid injuring the skin, or going twice over the same part. There are two ways in this country of depriving sheep of their wool. In the first, or coarser method, which is only adopted in the case of Cheviot and heath sheep, the operator sits upon the ground, and placing the animal on its back between his knees, shears the wool first from the belly and legs, and then, after tying the latter, proceeds to clear the back. In the second method, the legs are never tied, as the disposition of the sheep is such as to render it unnecessary. The animal is placed on its buttocks—the shearer *stands* with the head between or closely in front of his legs, and clips first one side, cutting from the middle of the belly to that of the back, down to the loins. It is then placed on its side, the knee of the operator pressing on its neck, and the wool is removed from the legs and buttocks. The fleece is next rolled up, with the cut side outwards, commencing at the tail, and using the wool of the other extremity as a fastening for the bundle.

A cool dry apartment should be selected in which to store the wool, always remembering that *heat* and *damp* are equally injurious to it, and that the greater the perfection in which it retains its *naturally oily* moisture, the more valuable will it prove both to the grower and the manufacturer.

Weaning.—Weaning, where milking is not practiced, ought to be set about in the end of July or beginning of August. In some places, the ewe lambs are never speaned, but allowed to go at large with their mothers; and though by this plan the dam is apt to be kept in poor condition, yet is this counterbalanced by the comparative freedom of the hogs from braxy. As an improvement, however, the gimmer lambs may be withheld for a fortnight from their mothers, and at the end of that time may be permitted to pasture with them.

When the udders of the ewes appear, after their separation from the lambs, to be much distended, they may be once or twice milked, to prevent bad consequences; but it is much better to obviate the necessity for this, by reducing their allowance of food for a few days. When the animal seems to suffer much irritation about the udder, it will always be safe to give a brisk dose of any of the common saline purgatives.

The store lambs are at this period sent to good pasture, or, where the farm cannot afford it, are *summered* at a distance; that is to say, the farmer pays so much a head for permission to feed his flock, during a couple of months, on another person's ground, at the end of which period they are turned upon the pasture which has just been vacated by the gimmers, they having been sent to join the older ewes.—*Blacklock's Treatise.*

Till faithfully, and you may expect abundance.

From Gray's Scientific and Practical Agriculture.

INDIAN CORN.

Indian corn, or *zea mais*, is a native of this country, and was unknown to Europeans until after the discovery of America. In consequence of the different climates and soils in which it has been cultivated for a long series of years, there have been produced several varieties, differing more in appearance and habits than many distinct species of plants. We know how some of these varieties are produced, and this may instruct us in the selection of the seed, in order to improve any particular variety, or to obtain a new one. One mode of obtaining varieties of corn, is by selecting the seed. Thus, for example, a celebrated variety has been produced in the Southern and Western States, by selecting the first year the seed from stalks which bore two ears, and taking the top ear to plant. The second season there were some stalks of three ears; and the top ears from these were then taken and planted; and this process was continued for a series of years. The consequence was, that the stalk became very high; and the number of ears upon a stalk increased from one to five, and even eight. It should be remarked, that though this process gave a distinct variety, yet it would have been a much more valuable variety, in this case, if the lower ears had been taken; by which means the stalks would have been lower, the ears nearer the ground, and hence much less liable to injury, and more likely to be early, plump, and well filled.

The soil for Indian corn should be a light sandy or gravelly loam. A rich dry soil is always to be preferred. Corn may be manured in the hill with compost or rotted manure. It is much better, however, to spread green manure or compost, and turn it into the soil. The corn may then be planted in rows, about three feet apart, and from five to six kernels in a hill, lightly covered with loam. It is desirable in theory to spread fifteen or twenty loads of green manure to the acre, and turn it under, to act upon the crop late in the season, and then to put five or six loads of compost in the hill, to give it an early start. This corresponds with the experience of the best farmers.

The after culture consists in two or three hoeings, or one cleaning with the cultivator and two hoeings. The first hoeing should remove the earth from the roots; the second should raise it into the form of broad, flat hills. Some experiments, however, seem to prove that corn is best cultivated on a flat surface, with a tillage depth of from six to twelve inches; and theory would lead us to the same conclusion. The practice of making hills, injures the roots and exposes them to the influence of drought.

The expense of this crop, and the value of its proceeds, may be estimated as follows:

Plowing,	$4 00	Produce, 35 bush.	$35 00
Manure,	12 00	Corn fodder,	10 00
Furrowing,	75		
Planting,	1 50		$45 00
First hoeing,	2 50	Deduct expense,	28 75
Second and third do.	4 00		
Gathering,	2 00	Profit,	$16 25
Husking,	2 00		

This, we think, is a very low estimate of the value of this crop; for the manure ought not, all of it, to be charged to the corn, as it generally suffices for two more crops. 40, 50, 60, and even 120 bushels, also, are often obtained per acre, in the Northern and Middle States.

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

BOSTON, WEDNESDAY, JUNE 8, 1842.

CHEMISTRY.

Doctors disagree—and FARMERS *too.*

Chemistry is bringing its aid to husbandry. Men of science are attempting to give to practical farmers, principles and rules to guide them safely and profitably in the practice of their art. Not only have the scientific men of Europe, as Liebig and Johnson, recently furnished us with Agricultural chemistries, but Dr. Jackson, in his Reports, and in other ways; Dr. Dana in his Muck Manual, and Mr Gray in his recent publication upon farming and horticulture, have here in our midst been seeking to reveal many of the mysteries of vegetable growth, and show us how we can best cause the earth to bring forth abundantly. The labors of men of science will benefit every tiller of the soil sooner or later. Science can lend, and does lend, important aid to art.

But, says one, the chemists themselves disagree, and therefore I have no confidence in them. Until they can unite upon some principles as settled, how can the unlettered farmer find it prudent to take the advice of any one among them all? Some of their views must be erroneous. And how can we determine which are so?

Such statements and facts constitute a valid objection to giving ourselves up to the exclusive guidance of any chemist—they constitute a reason why, when we look into an agricultural chemistry, we should keep in mind the results of our experience and observations in the field. We must judge whether the deductions of science, in the main, seem reasonable and in accordance with what we already know. If they do, we may get valuable hints from any and every agricultural chemistry; hints that may help us—*not* to forget our experience and blindly follow the chemist—but to find reasons why we succeeded or why we failed in years past; thus we may learn to go on more understandingly in future.

We value agricultural chemistry more as a science which throws light upon the farmer's past experience, and enables him for good cause either to retain unaltered or to slightly vary, and thus perhaps greatly improve, his past processes, than as a teacher whose instructions may throw experience into the back ground.

We trust that the works of the chemists will be read and studied more and more extensively, and that common sense, experience and observation will be brought to bear upon and select from them such parts as they approve and can use with fair promise of improvement.

The fact that the chemists disagree on some points, must not be pressed too hard. For practical *farmers* differ as much in opinion as do the chemists. One prefers to plant his potatoes upon old ground, and another upon new. One chooses to put the manure above the potatoes, while his neighbor will put the potatoes above the manure. One thinks it best to turn his manure down under the green sward, while others can find no benefit from it when thus placed. A. will make a high hill around his corn, while B. will make none. So that were one to undertake to get from *practical farmers —genuine striped-frock men*—were he to try to get from them a set of rules to guide him in the planting of potatoes, in applying manure, or in hoeing his corn, he would be in as great doubt what to do after he had consulted five or six of them, as he would be after he had read five or six treatises from the pens of those who give us lessons from the laboratory. What is the inference? Not, surely, that these practical men know nothing about their business, and can give no valuable information—but that different soils are not all to be treated alike; and consequently that each one must learn by experience in his own fields what his own soils require. He may get hints—may get instruction from both the practical men and the scientific men—but he must go to his own fields and there learn, by varying his processes and noting results, what is the best course for him, with his soil and in his circumstances.

We often hear the wish expressed that scientific men, and writers upon agriculture could settle some principles and give a set of rules for the husbandman which might be *safely* reduced to practice by all farmers. The wish is natural enough—but it is a wish for an impossibility. All the science that the world has ever had, and all the treatises and paragraphs that have ever been written upon agriculture, if read and studied ever so faithfully by a man in his closet, would not qualify him to go on to a farm containing the common variety of soils, and skilfully adapt his manure and his mode of treatment to each field, and to the different parts of each field. If he were a practical farmer, science and the experience of others might be of much service, as aids to his own experience—but they would be nothing more than aids.

On his own premises, each farmer has an instructive book always open before him—each springing, growing or ripening crop, each mode of tillage, each variety of plant, each manure, each different soil—these, and many other things, may be constantly giving him lessons, if he will but keep his eyes open and read. The teachings of others will help him to keep his eyes open —will stimulate and direct inquiry, will cause him to look closely, to reason, reflect, compare, and thus get useful information.

As an instance of the benefits which one practical man may derive from reading an account of what another has done, we will state that Hon. Wm. Clark, Jr. of Northampton, eight or ten years ago, gave to the public his process of seeding down light lands to grass by sowing the seed among the growing crop of Indian Corn. The hint was taken by Mr. Daniel Putnam, of Danvers, who in five different years since, has laid down in that way a portion of his farm to grass—and in no one instance has he failed to get a good result. We (editor) have helped to sow the seed there, to work it in, and to take off the crop; and we judge that in labor saved and in the increase of crop above what would probably have been obtained if seeded down with oats or barley, the profit has been, or soon will be, not less than 10 dollars per acre, on each of the eight or ten acres. A great point here is the certainty with which the grass takes. The neighbors have lost by drought and frost much of their grass, while Mr. Putnam has lost but little. Farmers from neighboring towns are coming to observe and to inquire—and appearances are that this mode of seeding down will be much extended in that vicinity.

One worthy farmer, who is strongly wedded to old ways, and who has been successful in getting more than a good living, has watched the doings in Mr. Putnam's fields for years, and as we supposed, without the slightest inclination to imitate his mode, has concluded to lay down four acres to grass with his corn crop this season. To those who know the man, this fact will be strong evidence that the reasons for departing from old ways are very good.

Such the results so far of reading the statements of one practical man—an argument in favor of *reading*. And though we have not in our experience so palpable a case in which a scientific man has sent out from the labaratory a statement that has been turned to such practical account, yet the statements of chemists are constantly furnishing facts and principles that throw much light upon the fields we till.

CEMENT.

In the New England Farmer, vol. xii., No. 3, page 21, we find the following statement:

"The late conquest of Algiers by the French, has made known a new cement, used in the public works in that city. It is composed of two parts of ashes, three of clay and one of sand; this composition, called by the Moors *Fabbi*, being again mixed with oil, resists the inclemencies of the weather better than marble itself."

Mr Dorr, of Roxbury, called upon us a few days ago to look up the above article in our back volumes, and stated that he used a cement made according to the above directions, around the window casings of a stone house he was building about the time this article appeared, and it has proved as good as the statement represents. It is as hard as marble, and will stick to wood as well as to stone.

NOTICES OF BOOKS.

Zamba, or the Insurrection—a dramatic poem by Mrs. E. Ricord. Published by John Owen, Cambridge, to whom we are indebted for a copy. We have had no time to read it yet.

Cobbett's American Gardener—a new edition. Saxton & Pierce are the Boston publishers. A spirited and good work.

MASS. HORTICULTURAL SOCIETY.

EXHIBITION OF FLOWERS.

Saturday, June 4, 1842.

By John A. Kenrick. Azalias, ten var.—Very fine. Early White Italian Honeysuckle. Pæony Moutan Banksii; P. Moutan papaveracea; P. tennifolia; P. rosea; P. albicans pleno; P. albiflora erubescens, &c. Scarlet Hawthorn; Scotch laburnum; Glycine sinensis —(beautiful)—Aristolochia sipho; Caucasian Honeysuckle, &c.

Four Bouquets and cut Pæonies, from John C. Howard, Brookline.

Cut Flowers of Magnolia, &c., from J. Carter, Botanic Garden.

Native Plants, from B. E. Cotting—Trillium cernuum; Corydalis glauca; Thesium umbellatum; Arum triphyllum; Aquilegia Canadensis; Aralia nudicaulis; Geranium maculatum; Chelidonium majus; Convalaria multiflora; Convalaria bifolia, &c. &c.

Italian Clover (Trifolium incarnatum)—from Capt. Lovett, Beverly

Bouquets from Wm. Kenrick, J. Hovey, Misses Sumner, J. L. L. F. Warren, S. Walker.

Twenty beautiful varieties of Geranium were exhibited, from the President of the Society. The list of the names having been taken away, they cannot be given.

EXHIBITION OF FRUITS.

By Dr. Howard—Miller's Burgundy and White Chaselas Grapes—very fine.

Vegetables —Cucumbers, by J. L. L. F. Warren.

JOHN A. KENRICK.

Sick Headache.—Two tea spoonsfull of finely powdered charcoal, drank in a half tumbler of water, will in less than fifteen minutes give relief to the sick headache, when caused, as in most cases it is, by a superabundance of acid on the stomach.—*N. Y. Herald.*

Common salt eight parts, saltpetre one part, well mixed together and applied to the surface of the ground connected with the trunk of the peach tree, will, it is said, destroy all worms and grubs and promote the thrift of the tree.

MASSACHUSETTS HORTICULTURAL SOCIETY.

At an adjourned meeting of the Society held June 4th,

Voted, That the Chairman of the different Committee be requested to report the weekly exhibitions of Flowers and Fruits. And that in the absence of the Chairman of either Committee, any member be requested to perform the duty of furnishing said reports, for the New England Farmer.

Also, that each person sending for exhibition Flowers, or Fruits, be respectfully requested to add a full list of the articles.

EBEN. WIGHT
Rec. Sec'y.

EXHIBITION OF GERANIUMS AND PÆONIES.

The exhibition of Pæonies and Geraniums for the Society's Premium, will take place on *Saturday, June 11th.*

Exhibiters will have their flowers in the stands by 11 o'clock.

Per order of the Committee.
C. M. HOVEY,
June 8. *Chairman.*

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded Northerly exposure, for the week ending June 5.

June, 1842.	5 A.M.	12, M.	7, P.M.	Wind.
Monday,	30	49	54	53	E.
Tuesday,	31	47	64	56	N. W.
Wednesday,	1	46	67	63	N.
Thursday,	2	44	71	60	S. E.
Friday,	3	45	73	61	S. E.
Saturday,	4	42	69	62	S. E.
Sunday,	5	70	83	73	S. W.

BRIGHTON MARKET.—Monday, June 6, 1842.

Reported for the New England Farmer.

At Market 250 Beef Cattle, 20 pairs Working oxen, 25 Cows and Calves, 500 Sheep and 650 Swine.

Prices.—*Beef Cattle.* A few extra $6 00 a 6 25. First quality, $5 50 a 5 75. Second quality, $5 50. Third quality, $4 75 a 5 75.

Working Oxen.—Sales 70, 75, 80, 85, 95, 100, and $105.

Cows and Calves. Sales 20, 22, 23, 25, 29, 30, and $37.

Sheep. Sales of lots from 1 50 to $3 00.

Swine.—Dull. Lots to peddle 3 for sows, and 4 for barrows. Large barrows 3 a 3 1-4. At retail, from 4 to 5 1-2

WHOLESALE PRICES CURRENT.

Corrected with great care, weekly.

SEEDS. Herds Grass, $2 75 to 3 00 per bushel. Red Top, 40 to 50 cents. Clover—Northern, 11 to 12c.—Southern, 9 a 10 c. Flax Seed, $2 00 per bushel. Lucerne, 25 c. per lb. Canary Seed, $5 00 a 6 00 per bushel.

GRAIN. Yellow flat Corn, 56 a 57; white, 55; of the latter there is but little afloat unsold; yellow round 60c; Oats 42 a 44c, and Rye 68c per bushel.

Corn—Northern, bushel 60 to— —do. Round Yellow 59 a 60 —do. Southern Flat Yellow 56 a 57—White do. 54 a 55 —Barley — a — —Rye, Northern, 67 a 68 —do. Southern, 60 a 63 —Oats, Southern, 40 a 42—Northern do. 45 to — — Beans, per bushel 75 a 1 50.—Shorts, per double bush. — a —.

FLOUR. Genesee, Akron brand, $7 a 7 1-8; and a small lot early in the week, for shipping, at $7 1-4; Ohio 5 7-8 a 6; Philadelphia to arrive, $6 a 6 12 per bbl.; Howard street, $6 per bbl.

Baltimore, Howard Street, 4 mos. cr. $6 50 a — —do wharf, $6 00 a — do. free of garlic, $6 25 a — —Philadelphia do. 4 mos. $6 12 a — —Fredericksburg, lowl'd 4 mos. $6 00 a 6 12—Alexandria, wharf mountain,— — a — —Georgetown, $6 25 a 6 62—Richmond Canal, $6 25 a 6 37 —do. City, $7 00 a 7 25—Petersburgh, South side $7 00 a — —do. Country $6 00 a 6 12—Genesee, common, cash, $6 31 a 6 37— do fancy brands $6 44 a 6 50 — Ohio via Canal. $6 00 a 6 12—do do New Orleans, cash $5 75 a 6 10. Rye, $3 75 a 4 00—Indian Meal in bbls. $3 00 a 3 12.

PROVISIONS. The sales by auction comprise Western Clear Pork, a first rate article, $10 25 a 10 50 per bbl. 4 mos cr Mess, inferior to good quality, $5 87 a 7 50 per bbl; prime do do. $1 a 5 50 per bbl; 100 casks Hams, 5 3-4 a 6 1-2c per lb. 4 mos. cr.

Beef—Mess, 4 mo. new bbl. $9 00 a 9 25—Navy—$7 75 a 8 00—No 1, $7 00 a 7 50—do Prime $4 50 a 5 00—Pork—Extra clear, 4 mo. bbl. $11 a 11 50 —do Clear $10 a 10 50 —do Mess — a — —do Prime $5 00 a 5 50—do Mess from other States — a —.—do Prime do do $5 00 a 5 50 — do Cargo do do — a — —Clear do do $10 00 a 11 00—Butter, shipping 6 a 11—do store, uninspected, 10 a 14—do dairy, 15 a 17.—Lard, No. 1, Boston ins. 5 1-2 a 6—do South and Western, 5 1-2 a 5 3-4—Hams, Boston, 7 a 7 1-2 —do Southern and Western, 3 a 6—Cheese, Ship'g and 4 meal, 6 a 8—do new milk, 9 a 10

WOOL. Duty. The value whereof at the place of exportation shall not exceed 8 cts. per pound, free. All whereof the value exceeds 8 cts. per pound, 32 per ct. ad val. and 4 cts per pound.

Prime or Saxony Fleeces, washed, lb. 44 a 45 c.—American full blood do 40 a 42—Do 3 4 do 37 a 40—Do. 1-2 do 33 a 35 -1-4 and common do 30 a 31 — Smyrna Sheep, washed, 20 a 25—Do. unwashed, 10 a 13—Bengasi do 8 a 10—Saxony, clean, — Buenos Ayres unpicked, 7 a 10—do. do. picked, 12 a 16—Superfine Northern pulled lamb 35 a 38—No. 1 do. do. do. 32 a 34—No. 2 do do do 21 a 24—No. 3 do do do 12 a 15.

HOPS. Duty 20 per cent.
1st sort, Mass. 1841 per lb 10 a 11.—2d do do do 8.

HAY, per ton, $19 to 22—Eastern Screwed $14 to 16

CHEESE—Shipping and 4 meal, 6 to 8c.—New 9 to 10.

EGGS, 12 a 16.

SOUTHDOWN STOCK.

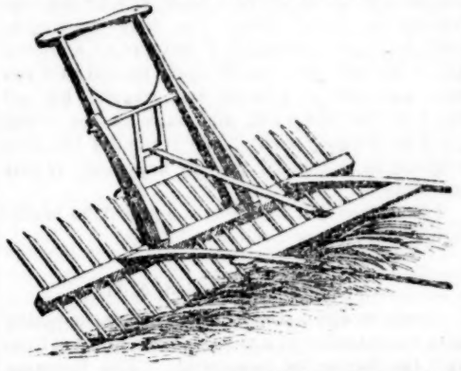
For sale by the subscriber at the foot of Atwell's Avenue in the city of Providence, one imported Southdown Buck, Six Ewes and four Lambs. The above are of the purest blood, and second to none in the country.

June 8. 8w JOHN GILES.

WANTED

To hire from 15 to 50 acres of land with buildings, from 3 to 10 miles of Boston. Communication to the office of this paper will be attended to. 3t* May 25

REVOLVING HORSE RAKE.



This is one of the most useful and labor saving machines now in use. One man and a horse with a boy to lead, will rake on an average from 25 to 30 acres per day, with ease and do the work well. There is a great advantage in this rake over all others, as the person using it does not have to stop the horse to unload the rake. For sale by J. BRECK & CO., No. 52 North Market st. May 22.

AGRICULTURAL IMPLEMENTS, &c

The Proprietors of the New England Agricultural Warehouse and Seed Store No. 51 and 52 North Market street, would inform their customers and the public generally that they have on hand the most extensive assortment of Agricultural and Horticultural Tools to be found in the United States. Part of which are the following:

1000 Howard's Patent Cast Iron Ploughs	100 doz. Cast Steel Shovels.
300 Common do. do.	150 " Common do.
200 Cultivators.	100 " Spades.
100 Greene's Straw Cutters.	500 " Grass Scythes.
50 Willis' do. do.	300 " Patent Snaiths.
100 Common do. do.	200 " Common do.
100 Willis' Patent Corn Shellers.	500 " Hay Rakes.
50 Common do do.	200 " Garden do.
200 Willis' Seed Sowers.	200 " Manure Forks.
50 " Vegetable Cutters	300 " Hay do.
50 Common do. do.	500 Pair Truce Chains.
200 Hand Corn Mills.	100 " Truck do.
200 Grain Cradles.	100 Draft do.
100 Ox Yokes.	500 Tie up do.
1500 Doz. Scythe Stones.	50 doz. Halter do.
3000 " Austin's Rifles.	1000 yards Fence do.
	25 Grind Stones on rollers.

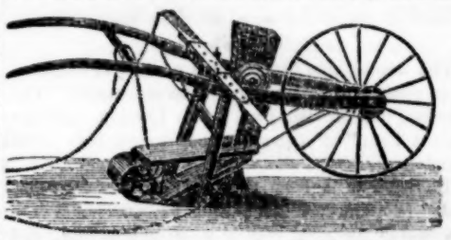
March 17.

POUDRETTE.

For sale 200 Barrels Poudrette, at $2 per barrel, by J. BRECK & CO, 51 and 52 North Market st., Boston.

May 18.

WILLIS'S LATEST IMPROVED SEED SOWER.



In using this machine, the farmer may be certain that his seed is put into the ground, and at the same time in the best possible manner. There has been a great difficulty in machines for sowing garden seeds; they are very apt to clog up, and the farmer might go over an acre of land and not sow a single seed; but not so with this; it is so constructed that it cannot possibly clog. In using this sower, the farmer can save one half of his seed, and do the work at less than one quarter the expense of the common way of sowing, and have it done in a much better manner; it opens the furrow, drops the seed, covers it over and rolls them down. It will sow any kind of Garden Seeds; say Ruta Baga, Mangel Wurtzel, Turnips, Carrots, Beets, Parsnips, Onions, &c. For sale at the New England Agricultural Warehouse and Seed Store, Nos. 51 and 52 North Market street, by JOSEPH BRECK & CO.

April 20

HOWARD'S IMPROVED EASY DRAUGHT PLOUGH.

Great improvements have been made the past year in the form and workmanship of these Ploughs; the mould board has been so formed as to *lay the furrow completely over, turning in every particle of grass or stubble, and leaving the ground in the best possible manner.* The length of the mould board has been very much increased, so that the Plough works with the greatest ease, both with respect to the holding and the team. The Committee at the late trial of Ploughs at Worcester, say,

"Should our opinion be asked as to which of the Ploughs we should prefer for use on a farm, we might perhaps say to the inquirer, if your land is mostly light and easy to work, try Prouty & Mears, but if your *land is heavy, hard or rocky,* BEGIN WITH MR. HOWARD'S."

At the above mentioned trial the Howard Plough *did more work, with the same power of team, than any other plough exhibited.* No other turned more than twenty-seven and one half inches, to the 112 lbs. draught, while the *Howard Plough turned twentynine and one half inches, to the same power of team!* All acknowledge that Howard's Ploughs are much the strongest and most substantially made.

There has been quite an improvement made on the shoe, or land side of this Plough, which can be renewed without having to furnish a new landside: this shoe likewise secures the mould board and landside together, and strengthens the Plough very much.

The price of the Ploughs is from $6 to $15. A Plough, sufficient for breaking up with four cattle, will cost about $10 50, and with cutter $11, with wheel and cutter, $12 50 extra.

The above Ploughs are for sale, wholesale and retail, at the New England Agricultural Warehouse and Seed Store, Nos. 51 & 52 North Market Street, by

JOSEPH BRECK & CO.

April 20

DAHLIAS.

For sale at the Agricultural Warehouse, No. 52 North Market street, a large assortment of Double Dahlias of the finest varieties. JOSEPH BRECK & CO.

Boston, May 3, 1842.

DAHLIA POLES.

JOSEPH BRECK & CO., offer for sale 1000 superior Dahlia Poles, with the bark pealed off, in bundles of 100, or by the dozen. Boston, May 3, 1842.

MISCELLANEOUS.

BELLS.

The largest size bells in this country seem small when compared with some in the old world. The principal bell of St. Paul's, in London, and the "Great Tom," of Lincoln, each weigh over 9000 pounds.

The largest bell in England, is the "Mighty Tom," of Oxford, which weighs 17,000 lbs. There is a bell of the same weight in Florence, hung 275 feet from the ground, which is 50 feet higher than the top of Bunker Hill monument when finished.

The great bell in St. Peter's, at Rome, recast in 1785, weighs 18,667 pounds.

The greatest bell in the world, is that at Moscow, which is broken and partly buried in the earth from its immense weight. It is supposed to weigh 432,000 lbs.

There is another bell in Moscow, now hanging in St. Ivan's church, weighing 228,000 lbs.

Chimes, or peals of bells, are common in England, but very rare in this country. It is supposed there are about 1100 in Great Britain, consisting of from five to twelve bells each.

Bells were formerly baptized, anointed and blessed by the bishops and monks, and inscriptions of some passage of scripture, or a brief couplet, were frequently made, which practice has continued nearly to our time. The prophetic verse on the celebrated "Liberty bell," on Independence Hall, in Philadelphia, is an instance of this:

"Proclaim liberty throughout the land, and to the inhabitants thereof."

This sacred bell which first rang the joyous peal of Independence, was brought over from England. It is now rung only on the 4th of July, and the 22d of February.

The following used to be common inscriptions on bells:

"Men's deaths I tell
By doleful knell."

"Lightning and thunder
I break in sunder."

"On Sabbath all
To church I call."

"The sleepy head
I raise from bed."

"The winds so fierce
I do disperse."

"When from the body parts the soul, I toll."

"I praise the true God, call the people, convene the clergy, lament the dead, dispel pestilence, and grace festivals."

Bells were formerly supposed to be of great use in expelling demons, and when any person in the parish was supposed to be dying, the *passing bell* was rung, i. e., the bell that solicited prayers for those who were *passing* into another world.—*Salem Observer.*

TO MAKE HOME HAPPY.

Nature is industrious in adorning her dominions; and man, to whom this beauty is addressed, should feel and obey the lesson. Let him too be industrious in adorning his domain—making his home, the dwelling of his wife and children, not only convenient and comfortable, but pleasant. Let him, as far as circumstances will permit, be industrious in surrounding it with pleasant objects—in decorating it, within and without, with things that tend to make it agreeable and attractive. Let industry make home the abode of neatness and order—a place which is enticing to every inmate, and which in absence draws back the heart by the fond associations of comfort and content. Let this be done, and this sacred spot will become doubly dear. Ye parents who would have your children happy, be ambitious to bring them up in the midst of a pleasant, a cheerful, a happy home. Waste not your time in accumulating wealth for them; strive rather to plant in their minds, in the way proposed, the seeds of virtue and prosperity.—*Selected.*

"THE DEACON FOR ME."

"Papa," said one of his boys to the deacon, "I had a funny dream last night."

"Well, son, what was it?"

"I dreamed the devil came into your store."

"The devil?"

"Yes, pa, the devil; that he found you drawing a glass of gin for poor Peter James, who has fits, and broke his little baby's arm the other day, because she cried when he came home drunk. And I thought the devil came up to the counter and laid the end of his tail on a chair, and leaned over towards the barrel where you were stooping to draw the liquor, and asked if you was n't a *deacon.* And I thought you did n't look up, but said you was; and then he grinned, and wagged his tail like a cat that has a rat, and says to me, "*that 'ere's the deacon for me!*" and ran out of the shop laughing so loud that I put my fingers in my ears and woke up."

The deacon quit the traffic and joined the Washington Temperance Society.—*Selected.*

AN ANGELIC HOUSEMAID.

A lady received a letter from another, inquiring as to the character of a young woman who had lived with the former as housemaid. The following were the queries put:

"Is she clean? sober? honest? steady? good tempered? willing to be taught? an early riser, without being called? not inclined to gossip and idle her time? and has she any followers? Does she well understand waiting at table? and cleaning plate? Is she quick? and can she sew neatly?"

To which the lady returned the following laconic reply:

"Dear Madam—Polly is an angel of a housemaid. From the making of a bed down to the threading of a needle, you will find her all that you could wish—*and even a little more.*"—*Selected.*

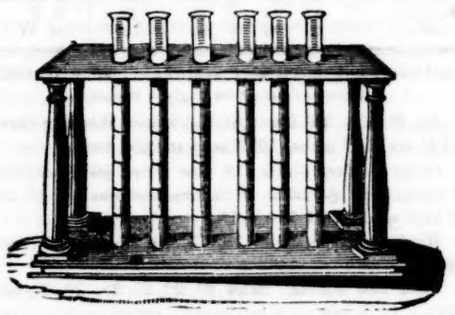
Horrid Depravity.—A Western paper tells of a gun which upon being discharged, not only kicked its owner over, but kept kicking him after he was down—and, adds the paper, would probably have kicked him to death, had it not been for the timely arrival of assistance.

A Delicate Morsel.—The editor of the Natchez Free Trader persuaded a very fastidious young lady to pick part of the rib of a very juvenile pig, by assuring her that it had been fed exclusively on *strawberries.*

GREEN'S PATENT STRAW CUTTER.

JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it efficiently.
2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.
3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.
4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.



LACTOMETERS—a simple instrument for testing the quality of milk. For sale by J. BRECK & CO.

DRAFT AND TRACE CHAINS.

400 pair Trace Chains, suitable for Ploughing.
200 " Truck and leading Chains.
200 " Draft Chains. For sale by J. BRECK & CO., No. 52 North Market st.

TYE UP CHAINS.

Just received by 500 Chains for tyeing up Cattle.

These chains, introduced by E. H. Derby, Esq. of Salem, and Col. Jacques, for the purpose of securing cattle to the stall, are found to be the safest and most convenient mode of fastening cows and oxen to the stanchion.

DAHLIA AND BEAN POLES.

500 dozen Dahlia and Bean Poles; also, 500 Spruce Poles 12 to 30 feet in length, for sale by MOSES FRENCH Jr., Maine wharf, near the bottom of Summer st.

June 1, 1842. 3w

SUN DIALS.

Just received a few of Sheldon & Moore's, Sun Dials, a very neat and useful article for the purpose of giving the time of day in the garden or field. Price 75 cents. For sale by J. BRECK & CO., No 51 and 52 North Market St.

Sept 1.

NEW ENGLAND FARMER.

A WEEKLY PAPER.

Terms, $2 per year *in advance*, or $2 50 if not paid within thirty days.

N. B.—Postmasters are permitted by law to frank all subscriptions and remittances for newspapers, without expense to subscribers.

TUTTLE AND DENNETT, PRINTERS.